ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 5

1. CONTRACT/PURCH ORDER/AGREEMENT NO.	2. DELIVERY ORDER/CALL NO.	3. DATE OF ORDER/CALL (YYYYMMMDD)	4. REQUISITION/PURCH REQUEST NO.	5. PRIORITY
N68936-99-D-0031	0002	19990513	See Herein	DOA7

6. ISSUED BY CODE

T&E and Logistics Contracts Dept.
NAWCWPNS Code 220000E
521 Ninth St., Bldg. 65
Point Mugu, CA 93042-5001

7. ADMINISTERED BY (If other than 6) CODE SO512A

DCMC Van Nuys
6230 Van Nuys Blvd.
Van Nuys, CA 91401-2713

8. DELIVERY FOB
- [X] DESTINATION
- [ ] OTHER (See Schedule if other)

9. CONTRACTOR CODE 9Z710 FACILITY

NAME AND ADDRESS
CTA, Inc.
900 Heritage Dr. Bldg. A
Ridgecrest, CA 93555

10. DELIVERY TO FOB POINT BY (DATE) (YYYYMMMDD) See Herein

11. X IF BUSINESS IS
- [ ] SMALL
- [ ] SMALL DISAD-VANTAGED
- [ ] WOMEN-OWNED

12. DISCOUNT TERMS

13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Block 15

14. SHIP TO CODE

See Herein

15. PAYMENT WILL BE MADE BY CODE SC1004

DFAS Columbus Center WEO
West Entitlement Operations
PO Box 182381 EFT: T
Columbus, OH 43218-2381

MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.

16. TYPE OF ORDER
- DELIVERY/CALL [X] This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.
- PURCHASE [ ] Reference your ____ furnish the following on terms specified herein.

ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.

NAME OF CONTRACTOR ____ SIGNATURE ____ TYPED NAME AND TITLE ____ DATE SIGNED (YYYYMMMDD) ____

[ ] If this box is marked, supplier must sign Acceptance and return the following number of copies.

17. ACCOUNTING AND APPROPRIATION DATA/LOCAL USE

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT
	See Herein				

*If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.

24. UNITED STATES OF AMERICA
BY: NATHAN SIMPSON CONTRACTING/ORDERING

25. TOTAL $288,482

29. DIFFERENCES

26. QUANTITY IN COLUMN 20 HAS BEEN
- [ ] INSPECTED
- [ ] RECEIVED
- [ ] ACCEPTED AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

DATE ____ SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE ____

27. SHIP. NO. ____ **28. D.O. VOUCHER NO.** ____ **30. INITIALS** ____

31. PAYMENT
- [ ] PARTIAL
- [ ] FINAL

32. PAID BY ____

33. AMOUNT VERIFIED CORRECT FOR ____

34. CHECK NUMBER ____

35. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT.

31. PAYMENT
- [ ] COMPLETE
- [ ] PARTIAL
- [ ] FINAL

DATE ____ SIGNATURE AND TITLE OF CERTIFYING OFFICER ____

35. BILL OF LADING NO. ____

37. RECEIVED AT	38. RECEIVED BY (Print)	39. DATE RECEIVED (YYYYMMMDD)	40. TOTAL CONTAINERS	41. S/R ACCOUNT NUMBER	42. S/R VOUCHER NO.

I. Supplies/Services

AMOUNT

0001 High Speed Maneuverable Seaborne Target/Seaborne Integrated Control System (HSMST/SICS) in accordance with Task Order SOW 3.1

0001AA HSMST/SICS Target System Phase I (SOW 3.1.1)

Max Estimated Cost	[redacted]
Base Fee	
Max Award Fee	
Total Cost + Award Fee	
Material Estimated Cost	
Travel	
Total	**$172,111**

CLINs 0001AB, 0002, and 0003 are unfunded. Contractor is not authorized to begin performance until funding is provided.

0001AB HSMST/SICS Target System Phase II (SOW 3.1.2)

Max Estimated Cost	[redacted]
Base Fee	
Max Award Fee	
Total Cost + Award Fee	
Material Estimated Cost	
Travel	
Total	**$13,864**

0002	QST-35A (17m)/SICS System (SOW 3.2)	
	Max Estimated Cost	[redacted]
	Base Fee	
	Max Award Fee	
	Total Cost + Award Fee	
	Material Estimated Cost	
	Travel	
	Total	**$74,256**
0003	Surface Targets 2000 (ST2000) Control System (SOW 3.3)	
	Max Estimated Cost	[redacted]
	Base Fee	
	Max Award Fee	
	Total Cost + Award Fee	
	Material Estimated Cost	
	Travel	
		$28,251
Grand Total CLINS 0001-0003		**$288,482**

II. LIMITATION OF COST (APR 1984)

FAR 52.232-20 applies to CLIN 0001AA.

III. INCREMENTAL FUNDING PLAN

In accordance with the clause entitled "Limitation of Cost (APR 1984)" FAR 52.232-20, the amount presently available for payment by the Government and allotted to this Task Order is $172,111. This amount covers the entirety of CLIN 0001AA. CLINs 0001AB, 0002, and 0003 remain unfunded.

IV. SCOPE:

The scope of this Task Order is contained within the Statement of Work, Enclosure (1).

V. PLACE OF DELIVERY/FOB DESTINATION:

The articles to be furnished shall be delivered and all transportation charges paid by the supplier to US Navy Seaborne Targets, Port Hueneme, CA. Deliveries will be accepted Monday through Thursday from 8:00 AM to 4:30 PM. No deliveries will be received on Fridays.

VI. INSPECTION AND ACCEPTANCE:

Inspection and acceptance will be performed at destination by the Contracting Officer's Representative (COR).

VII. SHIP TO/MARK FOR:

Each shipment will be clearly marked to show the following information:

SHIP TO:	MARK FOR:
US Navy Seaborne Targets	Contract N68936-99-D-0031
Code 531500E Bldg. 465	Delivery Order 0002
Port Hueneme, CA 93043	Attn: Jerry Belton

VIII. PERIOD OF PERFORMANCE:

The period of performance for this Task Order shall be completed within six months after the date of award.

IX. TRAVEL:

Approval for any travel other than that indicated in the Statement of Work shall be obtained in writing from the COR in advance. Costs associated with any travel not so approved by the Contracting Officer will be disallowed.

X. ACCOUNTING AND APPROPRIATION DATA:

AA: 97X4930.NH2C 000 77777 0 068936 2F 000000 009125406G00 $172,111.00
REQ: N63126-9125-406G JO: A533B9PXCB
FUNDING FOR CLIN 0001AA ONLY

XI. CONTRACTING OFFICER'S REPRESENTATIVE (COR):

The COR is responsible for monitoring the performance and progress as well as overall technical management of this order and should be contacted regarding questions or problems of a technical nature. When, if in the opinion of the contractor, the COR

requests effort outside the scope of this order, the contractor will promptly notify the Ordering Officer in writing. In no event however, will any understanding or agreement , modification, change order, or other matter deviating from the terms of the order between the contractor and any other person other than the Ordering Officer be effective or binding upon the Government.

Only when formalized by proper contractual documents executed by the Ordering Officer within the scope, or if a change order has been issued, shall any modifications or changes to the original contract occur.

On all problems that pertain to contract or order terms, the Contractor will contact the Ordering Officer.

The Ordering Officer is:

Nathan Simpson	Code 220000E	(805) 989-1303

The COR is:

Rosemarie Vorwork	Code 535000D	(760) 939-0260

The Technical Assistant is:

Jerry Belton	Code 531500E	(805) 982-2358

Statement Of Work (SOW) for
Combat Environment Simulation (CES) Contract
SEABORNE INTEGRATED CONTROL SYSTEM (SICS)
February 24, 1999

1.0 SCOPE

1.1 Background

The Naval Air Warfare Center, Weapons Division (NAWCWD), Surface Targets Team is responsible for the development and support of threat simulation systems for weapons development, Test and Evaluation (T&E) and aircrew tactics/training. These systems simulate sea-based threats against the U.S. Defense Forces and provide a realistic threat environment for seaborne, captive flight, and live firing tests at the Government's T&E Ranges. A continually evolving and advancing threat environment has dictated the need to simulate this changing environment; the Seaborne Integrated Control System (SICS), its ancillary equipment, and utilization of various platforms, fulfill this requirement.

1.2 General Scope of Work

This Statement of Work (SOW) covers the Contractor effort under the Combat Environment Simulation (CES) contract basic statement of work in support of the above threat simulators for the SICS Program. Support is required by the Surface Targets Team in the development of new capabilities and upgrade of existing capabilities for the platform variants of the threat simulation system. These systems are deployed to T&E and training ranges to provide a realistic threat environment for weapon systems development, test and evaluation, in addition to the T&E of defense suppression systems, EW systems, ECM equipment, and Electronic Counter-Countermeasures (ECCM) equipment.

The SICS is designed for use in SEaborne Powered TARgets (SEPTARs) like the QST-35A, Mobile Ship Target (MST), High Speed Maneuverable Seaborne Target (HSMST), and future variants of these craft. The SICS consists of several interchangeable modules whose numbers continually fluctuate with ongoing system development. Its modularity allows for configuration versatility and flexibility to meet various mission, application, and installation requirements, while simplifying its ability to be upgraded in support of new testing requirements and range applications.

The objective of this task order is to develop the SICS threat simulation system and associated ancillary equipment. Each system to be fabricated and provided by the Contractor shall be based on the Government's specification and drawing package.

2.0 APPLICABLE DOCUMENTS

2.1 Government and Industrial Documents

2.1.1	TSH0100	REV-BASIC	HSMST/SICS Target System Drawing Package
2.1.2	TS350000	REV- BASIC	QST-35A(17m)/SICS Target System Drawing Package
2.1.3	TD 539300E-98-002		HSMST/SICS System Controller Bench Test Procedure (Pre-Production)
2.1.4	TD08549		QST-35A/SICS Bench Test Procedure
2.1.5	TS20000	REV-BASIC	Surface Target 2000 Control System Drawing Package

3.0 REQUIREMENTS

The Contractor shall perform limited production of the following systems and subsystems: HSMST/SICS Target System, QST35A(17m)/SICS Target System, and Surface Target 2000 Control System. Tasking shall include: 1) fabrication and assembly of systems and subsystems in total or kit form and 2) update of documentation to reflect current designs and fabricated systems/subsystems. Prior to design and fabrication activity, the Contractor shall analyze existing documentation to understand current form, fit, and function requirements.

3.1 HSMST/SICS Target System (CES SOW 3.2)

The Contractor shall provide six (6) HSMST/SICS's. The system shall be based on the drawing referenced in paragraph 2.1.1 of this SOW. The Contractor shall re-engineer the system electronics to minimize custom assemblies and maximize Commercial Off The Shelf (COTS) equipment. The Contractor shall incorporate a standard VME backplane and 3U form factor for all Printed Circuit Boards (PCBs) and assemblies

3.1.1 HSMST/SICS Target System Phase One

The Contractor shall perform verification and validation of the drawings (referenced in 2.1.1) to ensure producibility and maintainability. Specifically, the Contractor shall analyze and research the use of alternate vendors, availability of parts, and manufacturing processes in order to reduce the cost of the units. The Contractor shall document any proposed design changes (paragraph 2.1.1, CDRL A001) and obtain approval from the Government prior to fabrication of the systems. Upon approval from the Government, the Contractor shall procure parts and materials required for six (6) HSMST/SICS systems, machine and fabricate all subassemblies and subsystems, perform final assembly on three (3) of the systems, including integration of all subsystems, update all design documentation to reflect the as-built system (paragraph 2.1.1, CDRL A001), and provide bench test procedure (paragraph 2.1.3, CDRL A002) for system level troubleshooting and maintenance that delineates and identifies a minimum of five (5) test points and their expected values. The Government, as detailed in paragraph 5.2.3 of this SOW, will furnish some components for the HSMST/SICS

assemblies. The Contractor shall provide test/inspection reports (CDRL A003) documenting the bench test results for the completed systems.

3.1.2 HSMST/SICS Target System Phase Two

Perform final assembly of the three (3) system kits generated during Phase 1 (paragraph 3.1.1), including integration of all subsystems, and provide test/inspection reports (CDRL A003) documenting the bench test results for the completed systems.

3.2 QST-35A(17m)/SICS System (CES SOW 3.2)

The Contractor shall provide one QST-35 A(17m)/SICS. The system shall be based on the drawing referenced in paragraph 2.1.2 of this SOW. Complete commonality with previously fielded units is required. The Contractor shall incorporate a standard VME backplane and 3U form factor for all PCB's and assemblies. Prior to design and fabrication activity, the Contractor shall analyze existing documentation to understand current form, fit, and function requirements. The Contractor shall also perform verification and validation of the drawings to ensure producibility and maintainability. Specifically, the Contractor shall analyze and research the use of alternate vendors, availability of parts, and manufacturing processes in order to reduce the cost of the units. The Contractor shall document any proposed design changes (paragraph 2.1.2, CDRL A001) and obtain approval from the Government prior to fabrication of the systems. Upon approval from the Government, the Contractor shall manufacture the systems and update all design documentation to reflect the as-built system (paragraph 2.1.2, CDRL A001). The Contractor shall provide bench test procedure (paragraph 2.1.4, CDRL A002) for system level troubleshooting and maintenance that delineates and identifies a minimum of five (5) test points and their expected values. The Contractor shall provide a test/inspection report (CDRL A003) documenting the bench test results for the completed system.

3.3 Surface Target 2000 (ST 2000) Control System (CES SOW 3.2)

The Contractor shall provide 5 prototype and 20 production Active Hub PCBs, 10 prototype and 40 production CPU-1 circuit card assemblies, and 10 prototype and 40 production CPU-2 circuit card assemblies. Each PCB and circuit card assembly shall be based on the drawing referenced in paragraph 2.1.5 of this SOW, with modifications to improve maintainability and manufacturability. All components for the prototype and production CPU circuit card assemblies, with the exception of the bare PCBs, will be furnished by the Government. Prior to fabrication, the Contractor shall analyze the existing documentation to understand current form, fit, and function requirements of the control system. The Contractor shall document any proposed design changes (paragraph 2.1.5, CDRL A001) and obtain approval from the Government prior to fabrication. Upon approval from the Government, the Contractor shall manufacture the systems and update all design documentation to reflect the as-built system (paragraph 2.15, CDRL A001).

4.0 SCHEDULE

The period of performance will be as follows:

HSMST Phase 1:	6	months after Task Order Award
HSMST Phase 2:	2	months duration if exercised
QST35A/SICS:	12	month duration if exercised
ST2000 Boards:	18	month duration if exercised

5.0 SPECIAL CONSIDERATIONS

5.1 The Technical Coordinator for this effort is:

Mr. Jerry T. Belton
Code 531500E
NAWCWPNS, Point Mugu
Telephone: (805) 982-2358, Facsimile (805) 982-2354

5.2 Government Furnished.

5.2.1 The Government will provide to the Contractor drawings for the systems and subsystems referenced in paragraph 3.0 of the SOW.

5.2.2 Any other data required to perform these efforts will be provided as Government Furnished Material (GFM) to the Contractor. Any data required shall be identified by the Contractor during the course of work defined in this SOW. The Contractor shall identify documentation that is maintained at the Contractor's facility.

5.2.3 The components that will be supplied to the contractor for the HSMST/SICS (paragraph 3.1) are detailed in parts lists that are integral to the drawing referenced in paragraph 2.1.1 of this SOW. The specific components and associated acquisition cost are provided as an attachment to this SOW. The components will be returned to the Government as part of the deliverable items.

5.2.4 The components that will be supplied to the contractor for the ST 2000 circuit card assemblies (paragraph 3.3) are detailed in parts lists that are integral to the drawing referenced in paragraph 2.1.5 of this SOW. The components and associated acquisition cost will be provided to the Contractor on an as needed basis. The components will be returned to the Government as part of the deliverable items.

5.3 Security Classification

UNCLASSIFIED

5.4 Travel

Non-local travel may be required in the performance of this task order to participate in technical interchange meetings and to research and gather technical information. Travel estimates shall be based on 12 trips for two people to Point Mugu, CA.

5.5 Reports

In support of this task order, the contractor shall deliver a monthly Cost, Schedule and Status Report (C/SSR) in accordance with CDRL A004. The Contractor will deliver a monthly status report that includes a summary of work performed, problems encountered, problems resolved, current schedules and information, including period and cumulative funds/hours expended. This report will be provided to the Technical Coordinator no later than 10 working days following the end of the Contractor's monthly accounting period.